

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for forming a liquid crystal alignment layer for use in a liquid crystal cell having liquid crystal filled between first and second substrates of the cell, said method comprising:

forming a liquid crystal film on at least one of the first or second substrates, the liquid crystal film ~~consisting of~~ comprising liquid crystals and having a thickness which is smaller than a thickness of the liquid crystal filled cell; and

irradiating the liquid crystal film with light wherein the wavelength of the light at least partially overlaps the absorption spectrum of the liquid crystals to form an alignment layer of liquid crystals.

2. (Previously Presented) The method of claim 1, wherein the liquid crystal film is formed by one of spin coating and dip coating.

3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein the liquid crystal film has a thickness ranging from about 2nm to about 0.1 micrometer.

5. (Original) The method of claim 1, wherein the liquid crystal film has a thickness ranging from about 2nm to about 20 nm.

6. (Original) The method of claim 1 further comprising laying a patterned mask over the liquid crystal film prior to the irradiating step and removing the mask after the irradiating step.
7. (Original) The method of claim 1, wherein the liquid crystal is selected from the group consisting of 4-cyano-4'-alkylbiphenyls, 4-cyano-4'-alkyloxybiphenyls, 4-alkyl-4'alkoxyazoxybenzenes and mixtures thereof.
8. (Original) The method of claim 1, wherein the liquid crystal film has an easy axis of orientation and an anchoring energy, wherein at least one of the easy axis of orientation and anchoring energy is locally varied across the liquid crystal film by at least one of exposure time of the light at a point on the liquid crystal film and polarization of the light at a point on the liquid crystal film.
9. (Original) The method of claim 8, wherein the direction of the easy axis can be locally varied across the alignment layer from 0° to 360°.
10. (Original) The method of claim 8, wherein the anchoring energy ranges from about 10^{-4} to about 10^{-2} erg/cm².
11. (Currently Amended) A method of forming a liquid crystal cell having liquid crystal filled between first and second substrates, said method comprising:
providing two opposed substrates each having an electrode, said two opposed substrates being said first and second substrates;
forming a first liquid crystal film on at least one of the first and second substrates on the surface facing the other substrate, the liquid crystal film comprising first consisting of selected liquid crystals and having a predetermined thickness which is smaller than a thickness of the liquid crystal filled cell;

irradiating the liquid crystal film with light prior to filling the cell with second liquid crystal, wherein the wavelength of the light at least partially overlaps the absorption spectrum of the liquid crystal film;

placing spacers between the substrates;

sealing three of the sides of the substrate to form a cell;

filling the cell with said second liquid crystal subsequent to the step of irradiating the liquid crystal film such that only the liquid crystal film on the at least one substrate is irradiated;

and

sealing the cell.

12. (Previously Presented) The method of claim 11, wherein the liquid crystal film is formed by one of spin coating and dip coating.

13. (Canceled)

14. (Previously Presented) The method of claim 11, wherein the liquid crystal film has a thickness ranging from about 2nm to about 0.1 micrometer.

15. (Previously Presented) The method of claim 11, wherein the liquid crystal film is formed by disposing liquid crystals in a solvent, depositing the combination on the substrate and removing the solvent.

16. (Original) The method of claim 11 further comprising laying a patterned mask over the liquid crystal film prior to the irradiating step and removing the mask after the irradiating step.

17. (Canceled)

18. (Original) The method of claim 11, wherein the first liquid crystal has an easy axis of orientation and an anchoring energy, wherein at least one of the easy axis of orientation and anchoring energy is locally varied across the liquid crystal film by at least one of exposure time of the light at a point on the liquid crystal film and polarization of the light at a point on the liquid crystal film.

19. (Original) The method of claim 11, wherein the first liquid crystal is selected from the group consisting of 4-cyano-4'-alkylbiphenyls, 4-cyano-4'-alkyloxybiphenyls, 4-alkyl-4'-alkoxy-azoxybenzenes, and mixtures thereof.

20. (Previously Presented) The method of claim 18, wherein the first and second liquid crystals have the same molecular structure.

21. (Previously Presented) The method of claim 18, wherein the liquid crystal film is formed from a liquid crystal medium coated on the substrate to a predetermined thickness.

22. (Previously Presented) The method of claim 11, wherein a further alignment layer is disposed on one of the substrates.

23. (Previously Presented) The method of claim 22, wherein the further alignment layer is selected from the group consisting of rubbed polyimides, light-irradiated polyimides, rubbed polyvinyl-aliquid crystal alcohol, light-irradiated polyvinyl-cinnamate, light-irradiated polysiloxane-cinnamates, and oblique evaporated Al_2O_3 .

24. (Currently Amended) A liquid crystal display comprising a first and second cell wall structures, electrodes disposed on facing sides of said first and second cell wall structures, an alignment layer disposed on at least one of said electrodes, and first liquid crystals disposed within a space between the first and second cell wall structures, wherein the alignment layer ~~consists essentially of~~ comprises a liquid crystal film ~~comprising of~~ comprising second liquid crystals, wherein the liquid crystal film has been irradiated with light, prior to disposing the first liquid crystals in

a space between the first and second cell wall structure, wherein said light ~~that~~ at least partially overlaps the absorption spectrum of the second liquid crystals.

25. (Previously Presented) The method of claim 1, wherein said method comprises a step in a method of forming a liquid crystal cell.

26. (Previously Presented) The method of claim 25, comprising:

providing two opposed substrates each having an electrode;

disposing first liquid crystals in a solvent;

depositing the first liquid crystals and solvent on at least one of the substrates on the surface facing the other substrate;

removing the solvent to form a liquid crystal film;

irradiating the liquid crystal film with light wherein the wavelength of the light that at least partially overlaps the absorption spectrum of the liquid crystal;

placing spacers between the substrates;

sealing three of the sides of the substrate to form a cell;

filling the cell with second liquid crystals; and

sealing the cell.

27. (Previously Presented) A liquid crystal cell made according to the method of claim 11.